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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,350

06/10/2005

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2380-1295

1940

23117 7590 12/24/2009
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EXAMINER

KHAN, MEHMOOD B

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

12/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/538,350	Applicant(s) HILDEBRAND ET AL.	
	Examiner MEHMOOD B. KHAN	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/03/2009 has been entered.

Response to Arguments

Applicant's arguments filed 11/03/2009 have been fully considered but they are not persuasive.

Applicant argues on page 21 that Faerber does teach or suggest the requirements of applicant's independent claims that a number of slots or frames of a second frame structure of the second communications standard is dependent upon the number and duration of the at least one transmission gap of the first frame structure.

The Examiner respectfully disagrees. Faerber clearly discloses a number of slots or frames of a second frame structure of the second communications standard is dependent upon the number and duration of the at least one transmission gap of the first frame structure (**0029**), where Faerber clearly states that targeted transmission gaps can be inserted based on the knowledge of the time structure of a channel (i.e. slots, since the channel is GSM) of the second radiocommunication system, which in turn reads on duration and number of the gap. Thus the claimed limitations have been met.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-18, 40-44, 50 and 63 are drawn to a method. Claims 19-36, 45-49 and 64 are drawn to a communications environment. Claims 51, 54 and 65 are drawn to a communications environment. Claims 55, 58 and 66 are drawn to a method. Claims 59, 61 and 67 are drawn to a method.

The claim groups above recite steps, and thus will be treated as method claims. The claims are non-statutory since the claims fail the machine or transformation test. In order to determine if a process is statutory, a machine or transformation test is used. The claims must include the use of a machine to perform the steps; and the steps should be for more than a field of use limitation and more than insignificant extra solution activity. Otherwise a method must particularly transform an article; and the steps should be for more than a field of use limitation and more than insignificant extra solution activity. Since the steps of the claimed methods do not comply with the above stated machine or transformation test, the claims are deemed non-statutory.

Claims 38 and 39 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 38 defines a computer program embodying functional descriptive material. The claims are directed to a computer program product. In this case neither a "computer program product" nor "computer readable medium" is defined in the instant specification and therefore it is considered that the Applicant intends these terms to cover any conceivable means, i.e.

both statutory (tangible embodiments) and nonstatutory (transitory embodiments). Thus it is possible to reasonably interpret the computer readable medium as a radio/electromagnetic signal (i.e. transitory). Any amendment to the claim should be commensurate with its corresponding disclosure and must have support.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ketseoglou in view of Faerber (US 2003/0031143).

Claim 1, Ketseoglou discloses a method for operating a first communications environment for which first communications resources (TG) are provided for communications according to a first communications standard type (**Col 3: 23-28, where Ketseoglou discloses a first protocol, i.e. a first communications environment using a first protocol**), Ketseoglou discloses using the first communication resources for communications according to the first communications standard type, using the first communications resources for communications according to a second communications standard type (**Col 3: 35-37, where Ketseoglou discloses a first and second protocol, It is well known ton one of ordinary skill in the art that cellular communications are enabled over resources, i.e. spectrum / time frames with time slots**), Ketseoglou discloses controlling the use of the first

communications resources as being used for communications according to the first communications standard type in dependence of communications to be performed according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol)**, communicating according to the first communications standard type by using a first frame structure including at least one transmission gap (TG) **(It is well known to one of ordinary skill in the art that a TDMA protocol and a spread spectrum protocol use different frame structures and guard time is used in a TDMA protocol)**, Ketseoglou discloses controlling the use of the first communication resources by controlling at least one of a number and duration of the at least one transmission gap (TG) **(Col 24: 41-46, where Ketseoglou discloses inserting time gaps between slots of both protocols)**.

Ketseoglou does not disclose using the at least one transmission gap (TG) for communications according to the second communications standard type for transmitting data of the second communications in the at least one transmission gap; and wherein a number of slots or frames of a second frame structure of the second communications standard type is dependent upon the number and the duration of the at least one transmission gap of the first frame structure.

In an analogous art, Faerber discloses using the at least one transmission gap (TG) for communications according to the second communications standard type for transmitting data of the second communications in the at least one transmission gap **(0027-0029, where Faerber insertion of transmission gaps for RSSI determination and evaluation of received control channels)**, Faerber discloses wherein a number of slots or frames of a second frame structure of the second communications standard

type is dependent upon the number and the duration of the at least one transmission gap of the first frame structure **(0029, where Faerber clearly states that targeted transmission gaps can be inserted based on the knowledge of the time structure of a channel (i.e. slots, since the channel is GSM) of the second radio communication system, which in turn reads on duration and number of the gap)**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ketseoglou to insert gaps in the transmission as taught by Faerber so as to increase capacity and improve quality **(0029)**.

Claim 2, Ketseoglou discloses controlling the use of the first communications resources (TG) for communications according to the first communications standard type in dependence of communications to be performed according to the first communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol)**.

Claim 3, Ketseoglou discloses using second communications resources provided for communications according to the second communications standard type for communications according to the first communications standard type and controlling the use of the second communications resources for communications according to the second communications standard type in dependence of communications to be performed according to the first communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots assigned to a protocol to be used by a different protocol depending on the number of users)**.

Claim 4, Ketseoglou discloses communicating according to the second communications standard type by using a second frame structure (**Fig. 15: 926a and 926b, where Ketseoglou discloses different frames from different protocols creating a composite frame**), Ketseoglou discloses controlling the use of the second communications resource by controlling at least one of a number and a duration of at least a part of the second frame structure being used for communications according to the second communications standard type (**Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol**).

Claim 5, Ketseoglou discloses controlling the use of the second communications resources for communications according to the second communications standard type in dependence of communications to be performed according to the second communications standard type (**Col 22: 33-43, Fig. 15: 926a and 926b, where Ketseoglou discloses time slots with respect to both communication protocols**).

Claim 6, Ketseoglou discloses wherein the first communications resources include a first frequency range (**Col 28: 19-22, Fig. 21: 985, where Ketseoglou discloses Group A frequencies**).

Claim 7, Ketseoglou discloses wherein the first frequency range and the second frequency range overlap at least partially (**Col 28: 23-28, where Ketseoglou discloses overlap**).

Claim 8, Ketseoglou discloses controlling the use of the first communications resources for a geographical area for which both communications according to the first communications standard type and communications according to the second communications standard type are provided (**Col 3: 23-29, where Ketseoglou discloses operation in the same or overlapping geographic region**).

Claim 9, Ketseoglou discloses available communications resources for communications according to the second communications standard type (**Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol**).

Claim 10, Ketseoglou discloses available communications resources for communications according to the first communications standard type (**Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol**).

Claim 11, Ketseoglou discloses providing the first communications resources as resources comprised by the first communications environment, which provides for communications according to the first communications standard type (**Fig. 15: 926a and 926b, where Ketseoglou discloses time slots used for both types of protocols**).

Claim 12, Ketseoglou discloses providing the first communications resources as resources comprised by the first communications environment, which provides for communications according to the first communications standard type (**Fig. 15: 926a and 926b, where Ketseoglou discloses time slots used for both types of protocols**), Ketseoglou discloses providing the second communications resources as resources comprised by a second communications environment, which provides for communications according to the second communications standard type (**Col 3: 23-28, where Ketseoglou discloses a second protocol, i.e. a second communications environment using a second protocol**).

Claim 13, Ketseoglou discloses communicating information indicating available communications resources for communications according to the second communications standard type to the first communications resources so as to control the use of the first communications resources (**Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol**).

Claim 14, Ketseoglou discloses communicating information indicating available communications resources for communications according to the first communications standard type to the second communications resources so as to control the use of the second communications resources (**Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60,**

where Ketseoglou discloses providing time slots for the use by the other protocol).

Claim 15, Ketseoglou discloses using the first communications resources for only communications according to the first communications standard type, or only communications according to the second communications standard type, or communications according to the first communications standard type and communications according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol).**

Claim 16, Ketseoglou discloses using the second communications resources for only communications according to the first communications standard type, or only communications according to the second communications standard type, or communications according to the first communications standard type and communications according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol).**

Claim 17, Ketseoglou discloses controlling the use of the first communications resources such that communications according to the first communications standard type are prioritized in relation to communications according to the second

communications standard type **(Col 32: 30-34, where Ketseoglou discloses prioritization)**.

Claim 18, Ketseoglou discloses controlling the use of the second communications resources such that communications according to the second communications standard type are prioritized in relation to communications according to the first communications standard type **(Col 32: 30-34, where Ketseoglou discloses prioritization)**.

Claim 19, Ketseoglou discloses a communications environment, being adapted to utilize first communications resources (TG) for communications according to a first communications standard type for communications according to a second communications standard type **(Col 3: 35-37, where Ketseoglou discloses a first and second protocol, It is well known ton one of ordinary skill in the art that cellular communications are enabled over resources, i.e. spectrum / time frames with time slots)**, Ketseoglou discloses to control the use of the first communications resources (TG) for communications according to the first communications standard type in dependence of communications to be performed according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol)**, Ketseoglou discloses wherein the first communications resources comprise a first frame structure including at least one transmission gap (TG) **(It is well known to one of ordinary skill in the art that a TDMA protocol and a spread spectrum protocol use different frame structures and guard time is used in a TDMA and TDD protocol)**, Ketseoglou

discloses wherein the communications environment is adapted to control the use of the first communications resources by controlling at least one of a number and duration of the at least one transmission gap (TG) **(Col 24: 41-46, where Ketseoglou discloses inserting time gaps between slots of both protocols)**.

The amendment to the limitations as analyzed with respect to the limitations as discussed in claim 1.

Claim 20, as analyzed with respect to the limitations as discussed in claim 2.

Claim 21, as analyzed with respect to the limitations as discussed in claim 3.

Claim 22, as analyzed with respect to the limitations as discussed in claim 4.

Claim 23, as analyzed with respect to the limitations as discussed in claim 5.

Claim 24, as analyzed with respect to the limitations as discussed in claim 6.

Claim 25, as analyzed with respect to the limitations as discussed in claim 7.

Claim 26, as analyzed with respect to the limitations as discussed in claim 8.

Claim 27, as analyzed with respect to the limitations as discussed in claim 9.

Claim 28, as analyzed with respect to the limitations as discussed in claim 10.

Claim 29, as analyzed with respect to the limitations as discussed in claim 11.

Claim 30, as analyzed with respect to the limitations as discussed in claim 12.

Claim 31, as analyzed with respect to the limitations as discussed in claim 13.

Claim 32, as analyzed with respect to the limitations as discussed in claim 14.

Claim 33, as analyzed with respect to the limitations as discussed in claim 15.

Claim 34, as analyzed with respect to the limitations as discussed in claim 16.

Claim 35, as analyzed with respect to the limitations as discussed in claim 17.

Claim 36, as analyzed with respect to the limitations as discussed in claim 18.

Claim 37, Ketseoglou discloses a radio base station for a communications environment being adapted to be operated according to the steps of claim 1 (**Fig. 13, where Ketseoglou discloses an integrated base station**).

Claim 38, Ketseoglou discloses a computer program product, comprising program code portions for carrying out the steps according to claim 1 (**Col 21: 14-22, where Ketseoglou discloses processors, it is well known to one of ordinary skill in the art that processors perform instructions based on computer program code**).

Claim 39, Ketseoglou discloses being stored on a computer readable storage medium or in a computer readable storage device (**Col 21: 14-22, where Ketseoglou discloses processors, Col 25: 22-29, where Ketseoglou discloses programming of time slots, it is well known to one of ordinary skill in the art that a processor is a computer readable storage device**).

Claim 40, Ketseoglou discloses wherein the second communications resources include a second frequency range (**Col 28: 23-28, Fig. 21: 981**).

Claim 41, as analyzed with respect to the limitations as discussed in claim 8.

Claim 42, as analyzed with respect to the limitations as discussed in claim 10.

Claim 43, as analyzed with respect to the limitations as discussed in claim 10.

Claim 44, Ketseoglou discloses providing the first communications resources and second communications resources as resources comprised by the first communications

environment, which provides for both communications according to the first communications standard type and communications according to the second communications standard type **(Col 22: 52-62, where Ketseoglou discloses using time slots based on a greater number of users of a protocol, Col 31: 56-60, where Ketseoglou discloses providing time slots for the use by the other protocol).**

Claim 45, as analyzed with respect to the limitations as discussed in claim 40.

Claim 46, as analyzed with respect to the limitations as discussed in claim 10.

Claim 47, as analyzed with respect to the limitations as discussed in claim 10.

Claim 48, as analyzed with respect to the limitations as discussed in claim 44.

Claim 49, as analyzed with respect to the limitations as discussed in claim 8.

Claim 50, Ketseoglou discloses wherein the second communications resources include a second frequency range **(Col 28: 19-22, where Ketseoglou discloses different frequency groups).**

Claims 51 and 55, as analyzed with respect to the limitations as discussed in claim 1.

Claims 52 and 56, wherein the first frame structure is according to wideband code division multiple access (WCDMA) and the second frame structure is according to time division multiple access (TDMA) **(Abstract).**

Claims 53 and 57, as analyzed with respect to the limitations as discussed in claim 52 and 56, respectively.

Claims 54 and 58, Ketseoglou discloses providing an offset for aligning a first one of the frames of the second frame structure with the at least one of the transmission gaps of the first frame structure **(Col 24: 6-33, where Ketseoglou discloses time gaps from a time frame #1 are inserted between time frame #1 and time frame #2).**

Claim 59, as analyzed with respect to the limitations as discussed in claim 1.

Claim 60, as analyzed with respect to the limitations as discussed in claim 58.

Claim 61, Ketseoglou discloses adaptively controlling the sharing based on a number of allocated and/or requested communications resources for the first communications and the second communications **(Col 23:35-58, where Ketseoglou discloses a demand migration table which shows sharing time slots between protocols).**

Claim 62, as analyzed with respect to the limitations as discussed in claim 1.

Claim 63, synchronizing the second frame structure of the second communications type with the first frame structure **(Col 3: 40-41, where Ketseoglou discloses synchronizing the two protocols).**

Claims 64-68, as analyzed with respect to the limitations as discussed in claim 63.

Claim 69, as analyzed with respect to the limitations as discussed in claim 1.

Claim 70, as analyzed with respect to the limitations as discussed in claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEHMOOD B. KHAN whose telephone number is (571)272-9277. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. B. K./
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617